ABSTRACT OF THE DISCLOSURE

The present invention relates generally to radio communication devices. More particularly, the present invention relates to a programmable radio frequency (RF) sub-system and wireless communications devices using such an integrated antenna/filter sub-system. In one embodiment, the programmable RF front end subassembly includes two antennas, RF filter sections that are integral to each antenna, and a programmable logic device as an antenna control unit. Each antenna consists of a planar inverted “F” antenna (PIFA) that is tuned to operate over a range of frequencies using voltage variable capacitors or RF switches that connect various capacitive loads in order to achieve the desired resonant frequencies. The wireless communication device further includes a control circuit coupled to the antenna to provide the control signals.